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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,345	01/04/2002	Hiroyuki Higuchi	52643-00350USPT	1483

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EXAMINER

SMITH, DUANE

ART UNIT PAPER NUMBER

1724

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,345

Applicant(s)

HIGUCHI, HIROYUKI

Examiner

Duane S. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1, 7. 6) ☐ Other:

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Status of copending applications listed in the specification at page 2 lines 5-10 should be updated.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 11-30-2000. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

It is suggested that in claim 10 "one more" be rewritten as "one or more"—as it appears that such is a typographical error.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2,4,10,11,12 are rejected under 35 U.S.C. 102(b) as being anticipated by anyone of Soya et al(US Patent No. 3,981,946), Marley(US Patent No. 4,011,287), Onodo et al(US Patent No. 3,904,722), and Kueffer(US Patent No. 5,012,841).

Each teach at least a steam conditioning valve having a pressure reducing section, moisture jet section including at least one flat nozzle positioned annularly around the moisture jet section. Soya et al teach a steam conditioning valve(10) having a pressure reducing section(14), moisture jet section(20) including at least one flat nozzle(22) positioned annularly around the moisture jet section. Marley teaches a steam conditioning valve(10) having a pressure reducing section(16) with small holes(22), moisture jet section(36) including at least one flat nozzle(56,58) positioned annularly around the moisture jet section(Fig. 3). Onodo et al teach a steam conditioning

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valve(10) having a pressure reducing section(14), moisture jet section(37) including at least one flat nozzle(41) positioned annularly around the moisture jet section. Kueffer teach a steam conditioning valve(Fig. 9) having a pressure reducing section with small holes(98), moisture jet section including at least one flat nozzle(100) positioned annularly around the moisture jet section.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over anyone of Soya et al(US Patent No. 3,981,946), Marley(US Patent No. 4,011,287), Onodo et al(US Patent No. 3,904,722), and Kueffer(US Patent No. 5,012,841) taken together with Rowland et al(US Patent No. 2,421,761)

Each disclose the steam valve essentially as claimed, supra. They do not disclose as in instant claim 3 that the nozzles are juxtaposed longitudinally in stages. However, it is well known in the art to juxtapose nozzles in stages as shown by Rowland et al(96,98). It would have been obvious to one of ordinary skill in the art at the time of the invention to juxtapose nozzles in the steam valve in order to provide a temperature gradient to control the degree of desuperheating of steam without causing thermal stresses as suggested by Rowland et al(col. 4 lines 70-72, col. 3 lines 1-15).

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over anyone of Soya et al(US Patent No. 3,981,946), Marley(US Patent No. 4,011,287), Onodo et al(US Patent No. 3,904,722), and Kueffer(US Patent No. 5,012,841).

Each disclose the steam valve essentially as claimed, supra. They do not disclose positioning the nozzle upstream of the pressure reducing section such that a conical pattern forming nozzle can spray a conical pattern without impacting the pressure reducing section. It would have been obvious to one of ordinary skill in the art to position the nozzle in such a way as to lessen thermal stresses within the apparatus through routine experimentation. With regards to claim 6 spraying in a planar pattern being a function of the pressurization of the nozzle. It would have been obvious to one of ordinary skill in the art to vary the pressurization in order to control the degree of desuperheating and thus obvious to form a planar pattern.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over anyone of Soya et al(US Patent No. 3,981,946), Marley(US Patent No. 4,011,287), Onodo et al(US Patent No. 3,904,722), and Kueffer(US Patent No. 5,012,841) taken together with Rowland et al(US Patent No. 2,421,761).

Each disclose the steam valve essentially as claimed, supra. They do not disclose as in instant claim 3 that the nozzles are juxtaposed longitudinally in stages. However, it is well known in the art to juxtapose nozzles in stages as shown by Rowland et al(96,98). It would have been obvious to one of ordinary skill in the art at the time of the invention to juxtapose nozzles in the steam valve in order to provide a temperature

gradient to control the degree of desuperheating of steam without causing thermal stresses as suggested by Rowland et al(col. 4 lines 70-72, col. 3 lines 1-15).

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over anyone of Soya et al(US Patent No. 3,981,946), Marley(US Patent No. 4,011,287), Onodo et al(US Patent No. 3,904,722), and Kueffer(US Patent No. 5,012,841).

Each disclose a method of operating a steam valve essentially as claimed. They do not disclose positioning the nozzle upstream of the pressure reducing section such that a conical pattern forming nozzle can spray a conical pattern without impacting the pressure reducing section nor spraying a planar pattern. It would have been obvious to one of ordinary skill in the art to position the nozzle in such a way as to lessen thermal stresses within the apparatus through routine experimentation. With regards to spraying in a planar pattern being a function of the pressurization of the nozzle. It would have been obvious to one of ordinary skill in the art to vary the pressurization in order to control the degree of desuperheating and thus obvious to form a planar pattern.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art references listed on PTO-892(Notice of References Cited) are considered to be of interest disclosing similar steam valves.

Schoomover, Jacobsen, Mauerer et al., Self, Lovick, Johnson, Feiss, Ripley et al, Kueffer et al '605, Tiefenthaler and Wullenkord disclose similar steam conditioning valves.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duane S. Smith whose telephone number is 703-308-3792. The examiner can normally be reached on 8:30-6:00 M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Duane S. Smith
Primary Examiner
Art Unit 1724

D. S. Smith
5-19-03

dss
May 19, 2003